

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for manufacturing electron emitters by providing pairs of element electrodes, and conductive layers connecting the element electrodes to each other on a substrate, the method comprising:

a step of forming banks surrounding electrode-forming regions for forming the element electrodes and conductive-layer forming regions for forming the conductive layers;

a step of lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the banks formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the banks;

lyophobing the banks using a CF₄ plasma process, the step of lyophobing the banks introducing fluorine groups into the banks;

a step of discharging first droplets toward the electrode-forming regions;

a step of discharging second droplets toward the conductive-layer forming regions; and

a step of removing the banks; and

a step of lyophilizing at least one of the electrode-forming region and the conductive-layer forming region,

wherein the banks consist of protrusion portions which function as partitions.

2. – 4. (Cancelled)

5. (Original) An electron emitter manufactured by the method according to Claim 1.

6. – 8. (Cancelled)

9. (Currently Amended) A method for manufacturing an electron emitter comprising:

defining a pair of spaced apart electrode-forming regions on a substrate;

defining a conductive layer-forming region on the substrate, the conductive layer-forming region interconnecting the electrode-forming regions;

forming a bank encircling the electrode-forming regions and the conductive layer-forming region;

lyophilizing the electrode-forming regions and the conductive-layer forming region using an O₂ plasma process, the step of lyophilizing the electrode-forming regions and the conductive-layer forming regions removing a residue of the bank formed in the electrode-forming regions and the conductive-layer forming region during the step of forming the bank;

rendering the bank lyophobic using a CF₄ plasma process, the step of rendering the bank lyophobic introducing fluorine groups into the bank;
discharging first droplets toward the electrode-forming regions to form a pair of element electrodes;
discharging second droplets toward the conductive layer-forming regions to form a conductive layer connecting the element electrodes to each other; and
removing the bank after the conductive layer and element electrodes are formed, wherein the bank consists of protrusion portions which function as partitions.

10. (Previously Presented) The method of claim 9, further comprising treating a portion of the conductive layer to form an electron-emitting section.

11. – 18. (Cancelled)